

COMPRESSIBLE ATHERECTOMY BURR

Abstract of the Disclosure

5 A rotational ablation atherectomy device including a flexible drive shaft and a compressible burr that may be inserted and extracted from a patient using a catheter having a diameter that is smaller than the operational diameter of the burr. In one embodiment, the burr includes a nose portion coupled to the drive shaft and one or more flexible abrasive disks disposed rearwardly from the nose portion. The flexible disks are foldable to be slidably received within a catheter. In another embodiment, the burr includes a support member coupled to the drive shaft, the support member
10 having a resilient panel that spirals outwardly, forming a generally cylindrical ablation surface. The flexible panel can be elastically urged toward the support member and slidably inserted into the catheter. In a third embodiment, the burr includes a plurality of struts that are coupled to the drive shaft. An elastically compressible body disposed between the struts permits the struts to flex inwardly to
15 reduce the burr diameter. In another embodiment, the burr includes a plurality of flexible wires attached at proximal and distal ends to the drive shaft. An abrasive sheath is disposed over the wires. The wires can be bent inwardly to compress the burr and re-expanded by rotation of the burr. In another embodiment, the burr comprises a nose portion and a resilient shell having a compressible, larger diameter
20 abrasive section disposed at the proximal end of the nose portion.